

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Yunlong Sun and Edward J. Swenson

Application No. 08/538,073

Filed: October 2, 1995

LASER SYSTEM AND METHOD FOR FUNCTIONAL For:

TRIMMING OF FILMS AND DEVICES

Date: November 10, 1997

Examiner: Geoffrey S. Evans

Group Art Unit: 2106

RECEIVED

**GROUP 2100** 

## TRANSMITTAL LETTER

# TO THE ASSISTANT COMMISSIONER FOR PATENTS:

Transmitted herewith in connection with the above-identified application are the following documents:

By

- Information Disclosure Statement. 1.
- Form PTO-1449. [X] 2.
- Copies of cited references (33). [X] 3.
- The Commissioner is hereby authorized to charge any additional [X]4. fees which may be required in connection with the filing of the enclosed documents or to credit any overpayment to Deposit Account No. 19-4455. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

Yunlong Sun and Edward J. Swenson

Michael L. Levine

Registration No. 33,947

STOEL RIVES LLP

900 SW Fifth Avenue, Suite 2300 Portland, Oregon 97204-1268

Telephone: (503) 224-3380 Facsimile: (503) 220-2480

Attorney Docket No. 26860/33:43 US



pplication No.: 08/538,073

Filed: October 2, 1995

Inventor(s): Yunlong Sun and Edward J. Swenson

Title: LASER SYSTEM AND METHOD FOR FUNCTIONAL TRIMMING OF FIRMS AND METHOD FOR FUNCTIONAL TRIMMING OF FUNCTIONAL TRIMMING OF FUNCTIONAL TRIMMING OF FUNCTIONAL TRIMMING OF FUNCTIONAL TRIMMING FUNCTIONAL TRIMING FUNCTIONAL TRIMMING FUNCTIONAL TRIMMING FUNCTIONAL TRIMING FUNCTIONAL TR

Art Unit:

2106

Examiner:

Geoffrey S. Evans

Attorney Docket No.: 26860/33:43 US

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### **CERTIFICATE OF MAILING**

Date of Deposit November 10, 1997

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: ASSISTANT COMMISSIONER FOR PATENTS, WASHINGTON, D.C. 20231

Signature

Deanna J. Sullivan

Typed or printed name of person signing certificate

#### Attachment:

[X] Information Disclosure Statement

Form PTO-1449 [X]

[X] Cited References



#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

1-2-97

In re application of

Group Art Unit: 2106

#### Yunlong Sun and Edward J. Swenson

Application No. 08/538,073

Filed: October 2, 1995

For: LASER SYSTEM AND METHOD FOR FUNCTIONAL

TRIMMING OF FILMS AND DEVICES

Date: November 10, 1997

Examiner: Geoffrey S. Evans

#### **INFORMATION DISCLOSURE STATEMENT**

#### TO THE ASSISTANT COMMISSIONER FOR PATENTS:

Pursuant to their duty of disclosure, applicants enclose copies of the references listed on the accompanying Form PTO-1449. These references were brought to the attention of applicants' agent after payment of the issue fee. Applicants request, therefore, that the enclosed documents be placed in the file in accordance with 37 CFR 1.97 (i). Applicants' agent believes that these references are merely cumulative to the art already cited during prosecution.

Respectfully submitted,

Yunlong Sun and Edward J. Swenson

Ву

Michael L. Levine

Registration No. 33,947

STOEL RIVES LLP 900 SW Fifth Avenue, Suite 2300 Portland, Oregon 97204-1268 Telephone: (503) 224-3380

Facsimile: (503) 220-2480

Attorney Docket No. 26860/33:43 USA

Order

PDX4-88715.1 26860-0033

Sheet 1 of 3

FORM PTO-1449 (REV. 7-80)

## U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. 26860/33:43

APPLICATION NO. 08/538,073

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)

APPLICANT

Yunlong Sun and Edward J.

FILING DATE

GROUP 1997

October 2, 1995

U.S.	<b>PATENT</b>	<b>DOCUMENTS</b>
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	AB	4	9	1	4 5	5	8	0	3	10/23/90	Esterowitz et al.	372	5	
	AC	4	9	1	4 2	2	5	8	2	07/17/90	Kintz et al.	372	18	
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#### FOREIGN PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

1,25	1995 "Optimization of Memory Redundancy Laser Link Processing," Sun et al.
AM	
_	1991 "Focused Ion Beams," Orloff
AN	
	1990 "Polysilicon Resistor Trimming by Laser Link Making," Parker, et al.
AO	
	1989 "Polycrystalline Silicon Resistor Trimming by Laser Annealing," Crowley
AP	
	1989 "Explosion of Poly-Silicide Links in Laser Programmable Redundancy for VLSI Memory Repair," Lu,
AQ	Chlipala, Scarfone
	AM AN AO AP

**EXAMINER** 

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (REV. 7-80)

# U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. 26860/33:43

APPLICANT

APPLICATION NO. 08/538,073

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October 2, 1995 VUV

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- Constitution	l l	1989 "Computer-Simulated Explosion of Poly-Silicide Links in Laser-Programmable Redundancy for VLSI							
	AA	Memory Repair," Chlipala, Scarfone							
		1987 "Laser Processing for Application Specific Integrated Circuits (ASICs)," Smart & Stewart							
	AB								
		1986 "Computer Simulation of Target Link Explosion in Laser Programmable Redundancy for Si Memory,							
	AC	Scarfone & Chlipala							
		1984 "Considerations of Laser Material Interactions for the Trimming of Thin Film Resistors," Smart							
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		1983 "Laser Adjustment of Linear Monolithic Circuits," Litwin & Smart							
	AE								
		1982 "Semiconductor Processing Applications with Lasers," Kestenbaum							
	AF								
·		1982 "Laser-Assisted Poly-Si Resistor Fuse Utilizing Silicon Lateral Flow," Iwai, et al.							
	AG								
		1981 "Laser Programmable Redundancy and Yield Improvement in a 64k DRAM," Smith et al.							
	AH								
	A.T.	1981 "Laser Beam Processing," Cable							
	AI								
	AJ	1981 "A Technique for Automatic Focusing and Alignment of Monolithic Circuits for Laser Trimming,"							
	AJ	Wells et al.							
	AK	1980 "Photoexcitation Effects During Laser Trimming of Thin-Film Resistors on Si," Kestenbaum & Baer							
	AK								
	AT	1980 "Lasers in Semiconductor Processing," Burggraaf							
	AL								
EXAMIN	ER	DATE CONSIDERED							

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Sheet 3 of 3 APPLICATION NO. U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. FORM PTO-1449 PATENT AND TRADEMARK OFFICE 08/538,073 26860/33:43 (REV. 7-80) APPLICANT INFORMATION DISCLOSURE CITATION Yunlong Sun and Edward J. Swenson (Use several sheets if necessary) **GROUP** FILING DATE October 2, 1995 OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.) 1979 "Reliability of LSI Memory Circuits Exposed to Laser Cutting, AA 1979 "Interference Effects in Laser Micromachining of Thin Films on Silicon," Kestenbaum AB 1979 "A Fault-Tolerant 64k Dynamic Ram," Cenker, et al. AC 1978 "Effect of Vapor Plasma on the Coupling of Laser Radiation with Al Targets," Shui, et al. AD 1977 "Laser Vaporization of Metal Films - Effect of Optical Interference in Underlying Dielectric Layers," ΑE North 1976 "A Passive Laser-Trimming Technique to Improve D/A Linearity," Price AF 1975 "Connections and Disconnections on Integrated Circuits Using Nanosecond Laser Pulses," Cook, et al. AG 1974 "An Overview of Laser Functional Trimming Techniques," Hurtig & Swenson (ESI) AΗ 1974 - "Algorithmic Trimming on Active Circuitry," Faber ΑI ΑJ

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